

**IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF NEW YORK**

SIGNIFY NORTH AMERICA CORPORATION  
and SIGNIFY HOLDING B.V.

Plaintiffs,

vs.

QINGDAO YEELINK INFORMATION  
TECHNOLOGY CO., LTD.

Defendant.

Civil Action No. 1:19-cv-9315

**JURY TRIAL DEMANDED**

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiffs Signify North America Corporation and Signify Holding B.V. (collectively, “Signify”) for their complaint against Defendant Qingdao Yeelink Information Technology Co., Ltd. (the “Defendant”) allege as follows:

**NATURE OF THE ACTION**

1. This is a civil action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq.* including 35 U.S.C. § 271, which gives rise to the remedies specified under 35 U.S.C. §§ 281 and 283-285.

**THE PARTIES**

2. Plaintiff Signify North America Corporation (formerly known as Philips Lighting North America Corporation) is a corporation organized and existing under the laws of Delaware with its principal place of business at 200 Franklin Square Drive, Somerset, New Jersey 08873. Signify North America Corporation is registered to do business in the Commonwealth of

Massachusetts and has a place of business at 3 Burlington Woods Drive, Burlington, Massachusetts 01803.

3. Plaintiff Signify Holding B.V. (formerly known as Philips Lighting Holding B.V.) is a corporation organized and existing under the laws of the Netherlands with its registered office at High Tech Campus 48, 5656 AE Eindhoven, The Netherlands.

4. On information and belief, Defendant Qingdao Yeelink Information Technology Co., Ltd. is a limited liability corporation organized and existing under the laws of China with a place of business at Rm B4, 10/F, B Blk, Qingdao International, Innovation Park, Kewei Rd, Laoshan Dist, Qingdao, Shandong CHINA 266100.

#### **JURISDICTION AND VENUE**

5. This Court has subject-matter jurisdiction over this patent infringement action pursuant to 28 U.S.C. §§ 1331 and 1338.

6. On information and belief, this Court has personal jurisdiction over Defendant based on at least the following: (i) Defendant has committed acts of patent infringement in this District; (ii) Defendant has regularly conducted business, solicited business, and/or derived substantial revenue from products provided within this District, including products that infringe Signify's patented technology; and (iii) Defendant's website provides a page ([https://www.yeelight.com/en\\_US/store](https://www.yeelight.com/en_US/store)) for finding authorized stores by country that directs to Defendant's Amazon seller page at [https://www.amazon.com/stores/node/16091459011?encoding=UTF8&fieldlbr\\_brands\\_browse-bin=YEELIGHT&ref=bl\\_dp\\_s\\_web\\_16091459011](https://www.amazon.com/stores/node/16091459011?encoding=UTF8&fieldlbr_brands_browse-bin=YEELIGHT&ref=bl_dp_s_web_16091459011), by which customers can purchase Defendant's products in this District.

7. Venue is proper in this District under 28 U.S.C. §§ 1391(b), (c) and/or 1400(b) because, on information and belief, Defendant is subject to personal jurisdiction in this District,

Defendant is a foreign corporation for which venue is proper in any judicial district, and Defendant has committed acts of patent infringement in this District.

### **THE PATENTS-IN-SUIT**

8. Signify is the global market leader for lighting products with recognized expertise in the development, manufacturing, and application of innovative LED lighting solutions. Signify's LED lighting products have been installed and utilized throughout the world, including atop the Empire State Building.

9. To protect its intellectual property resulting from its significant investments, Signify applied for and obtained numerous patents directed to various LED inventions and technologies. For example, Signify's LED-related patents include U.S. Patent Nos. 6,969,954, 6,692,136, 7,014,336, 7,255,457, and 9,184,497 (collectively, the "Patents-in-Suit").

10. U.S. Patent 6,692,136 ("the '136 Patent"), titled "LED/Phosphor-LED Hybrid Lighting Systems," was duly and legally issued by the United States Patent and Trademark Office on February 17, 2004. Plaintiff Signify Holding B.V. is the assignee and owner of all right, title, and interest in the '136 Patent, a copy of which may be found at <http://patft1.uspto.gov/netacgi/nph-Parser?patentnumber=6692136>.

11. U.S. Patent 6,969,954 ("the '954 Patent"), titled "Automatic Configuration Systems and Methods for Lighting and Other Applications," was duly and legally issued by the United States Patent and Trademark Office on November 29, 2005. Signify North America Corporation is the assignee and owner of all right, title, and interest in the '954 Patent, a copy of which may be found at <http://patft1.uspto.gov/netacgi/nph-Parser?patentnumber=6969954>.

12. U.S. Patent 7,014,336 ("the '336 Patent"), titled "Systems and Methods for Generating and Modulating Illumination Conditions," was duly and legally issued by the United

States Patent and Trademark Office on March 21, 2006. Plaintiff Signify North America Corporation is the assignee and owner of all right, title, and interest in the '336 Patent, a copy of which may be found at <http://patft1.uspto.gov/netacgi/nph-Parser?patentnumber=7014336>.

13. U.S. Patent 7,255,457 (“the '457 Patent”), titled “Methods and Apparatus for Generating and Modulating Illuminations Conditions,” was duly and legally issued by the United States Patent and Trademark Office on August 14, 2007. Plaintiff Signify North America Corporation is the assignee and owner of all right, title, and interest in the '457 Patent, a copy of which may be found at <http://patft1.uspto.gov/netacgi/nph-Parser?patentnumber=7255457>.

14. U.S. Patent 9,184,497 (“the '497 Patent”), titled “Lighting Device with Built-In RF Antenna,” was duly and legally issued by the United States Patent and Trademark Office on November 10, 2015. Plaintiff Signify Holding B.V. is the assignee and owner of all right, title, and interest in the '497 Patent, a copy of which may be found at <http://patft1.uspto.gov/netacgi/nph-Parser?patentnumber=9184497>.

### **COUNT ONE**

#### **INFRINGEMENT OF U.S. PATENT NO. 6,692,136**

15. Signify incorporates by reference the allegations in paragraphs 1-14 as if fully set forth herein.

16. On information and belief, Defendant has infringed and is infringing claims of the '136 Patent, including at least claim 1, in violation of 35 U.S.C. § 271(a) by manufacturing, using, offering to sell, selling, and/or importing infringing products.

17. Claim 1 of the '136 Patent recites:

A lighting system for producing white light, the system comprising:

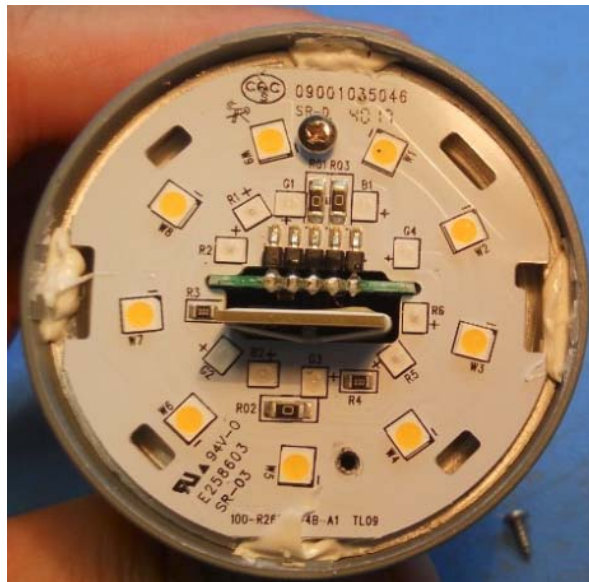
at least one light emitting diode; and

a phosphor-light emitting diode disposed adjacent to the at least one light emitting diode.

18. On information and belief, Defendant has directly infringed and is directly infringing claim 1 of the '136 Patent by making, using, offering to sell, selling, and/or importing at least YLDP03YL Smart LED Bulb (Color) and YLDP06YL Smart LED Bulb (Color) products in this judicial district and elsewhere in the United States.

**Infringing YLDP03YL Smart LED Bulb (Color) Products**

19. On information and belief, YLDP03YL Smart LED Bulb (Color) products form a lighting system for producing white light.



20. On information and belief, the YLDP03YL Smart LED Bulb (Color) products include at least one light emitting diode; for example, multiple light emitting diodes (e.g., red LEDs R1-R6, green LEDs G1-G4, and blue LEDs B1-B3) are included, as shown above.

21. On information and belief, YLDP03YL Smart LED Bulb (Color) products include a phosphor-light emitting diode disposed adjacent to the at least one light emitting diode; for example, multiple phosphor-light emitting diodes (e.g., white LEDs W1-W8), each of which

comprise a blue light emitting diode coated with a phosphor in order to produce white light, are respectively positioned next to at least one of the light emitting diodes, as shown above.

**Infringing YLDP06YL Smart LED Bulb (Color)**

22. On information and belief, YLDP06YL Smart LED Bulb (Color) products form a lighting system for producing white light.



23. On information and belief, YLDP06YL Smart LED Bulb (Color) include at least one light emitting diode; for example, multiple light emitting diodes (e.g., red LEDs R1-R3, green LEDs G1-G3, and blue LEDs B1-B3) are included, as shown above.

24. On information and belief, YLDP06YL Smart LED Bulb (Color) include a phosphor-light emitting diode disposed adjacent to the at least one light emitting diode; for example, multiple phosphor-light emitting diodes (e.g., white LEDs W1-W12), each of which comprise a blue light emitting diode coated with a phosphor in order to produce white light, are respectively positioned next to at least one of the light emitting diodes, as shown above.

25. The full extent of Defendant's infringement is not presently known to Signify. On information and belief, Defendant has made and sold, or will make and sell, products under different names or part numbers that infringe the '136 Patent in a similar manner. Signify makes

this preliminary identification of infringing products and infringed claims in Count One without the benefit of discovery or claim construction in this action, and expressly reserves the right to augment, supplement, and revise its identifications based on additional information obtained through discovery or otherwise.

26. Signify has suffered and continues to suffer damages as a result of Defendant's infringement of the '136 Patent in an amount to be determined at trial.

27. Defendant's infringement of the '136 Patent is causing irreparable harm for which Signify has no adequate remedy at law unless Defendant is enjoined by this Court. Under 35 U.S.C. § 283, Signify is entitled to a permanent injunction against further infringement of the '136 Patent.

28. On information and belief, Defendant has been aware of and have had notice and actual knowledge of the '136 Patent and its infringement of the '136 Patent at least as early as August 8, 2018, and Defendant's infringement of the '136 Patent has been willful. For example, in July 2014, a representative of Signify met with Mr. Jiang Zhaoning, CEO of Defendant to discuss the patent relevance between Defendants' products and Signify's patents. Also, in September 2015, a representative of Signify had a face-to-face meeting with Mr. Liu Daping, COO of Defendant to discuss the patent relevance between Defendants' products and Signify's patents. Further, on August 8, 2018, Mr. Jiang Zhaoning, CEO of Defendant and Mr. Liu Daping, COO of Defendant, were notified in writing that Defendant's products were infringing the '136 Patent. Defendant's pre-suit knowledge of the '136 Patent and failure to substantively address Signify's numerous notifications of infringement are sufficient to support a plausible inference that Defendant's infringement was willful and egregious, warranting enhancement of damages under 35 U.S.C. § 284, and attorneys' fees and costs incurred under 35 U.S.C. § 285.

**COUNT TWO**

**INFRINGEMENT OF U.S. PATENT NO. 6,969,954**

29. Signify incorporates by reference the allegations in paragraphs 1-28 as if fully set forth herein.

30. On information and belief, Defendant has infringed and is infringing claims of the '954 Patent, including at least claim 1, in violation of 35 U.S.C. § 271(a) by manufacturing, using, offering to sell, selling, and/or importing infringing products.

31. Claim 1 of the '954 Patent recites:

A system of networked illumination devices, comprising:

at least one illumination device configured and arranged to provide at least visible light over an area and to transmit information that uniquely identifies the at least one illumination device;

a receiver configured and arranged to receive the information from the illumination device;

a controller configured and arranged to assign at least one network address to the illumination device in response to the information received from the illumination device; and

a communication link between the receiver and the controller to transmit said information from the receiver to the controller.

32. On information and belief, Defendant has directly infringed and is directly infringing claim 1 of the '954 Patent by making, using, offering to sell, selling, and/or importing at least YLFW01YL Ambience Lamp products in this judicial district and elsewhere in the United States.

**Infringing YLFW01YL Ambience Lamp**

33. On information and belief, YLFW01YL Ambience Lamp products, together with a mobile application provided by Yeelight, form a system of networked illumination devices.

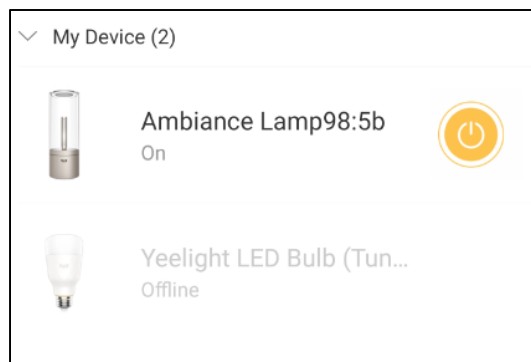
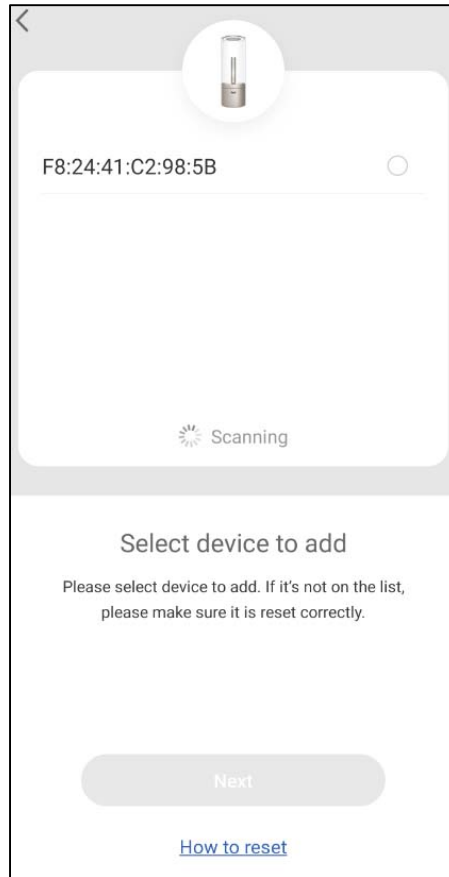


34. On information and belief, YLFW01YL Ambience Lamp products form at least one illumination device configured and arranged to provide at least visible light over an area and to transmit information that uniquely identifies the at least one illumination device; for example, the Yeelight YLFW01YL is a lighting device that produces warm white light and is configured to transmit a Bluetooth Address (e.g., Bluetooth Address F8:24:41:C2:98:5B, as shown below) that uniquely identifies the lighting device.



35. On information and belief, a Bluetooth antenna forms a receiver configured and arranged to receive the information from the illumination device; for example, a Bluetooth antenna (disposed underneath sticker in the image above) is configured to receive and transmit the Bluetooth Address stored in the YLFW01YL Ambience Lamp.

36. On information and belief, the Yeelight mobile application forms a controller configured and arranged to assign at least one network address to the illumination device in response to the information received from the illumination device; for example, the Yeelight mobile application, provided by Defendant and running on a Bluetooth-enabled Android or iOS mobile device, assigns a network address to the YLFW01YL, whereby the YLFW01YL may be selected and controlled by a user, in response to the receiving the Bluetooth Address during an inquiry state, as shown in the portions of the screenshots of the provided application, below:



37. On information and belief, the Bluetooth connection between the Bluetooth antenna and the Yeelight application running on a Bluetooth-enabled mobile device forms a communication link between the receiver and the controller to transmit said information from the receiver to the controller; for example, the Bluetooth antenna transmits the Bluetooth Address to the Yeelight application running on the Bluetooth-enabled mobile via a communication link formed by the Bluetooth connection.

38. The full extent of Defendant's infringement is not presently known to Signify. On information and belief, Defendant has made and sold, or will make and sell, products under different names or part numbers that infringe the '954 Patent in a similar manner. Signify makes this preliminary identification of infringing products and infringed claims in Count Two without the benefit of discovery or claim construction in this action, and expressly reserves the right to augment, supplement, and revise its identifications based on additional information obtained through discovery or otherwise.

39. Signify has suffered and continues to suffer damages as a result of Defendant's infringement of the '954 Patent in an amount to be determined at trial.

40. Defendant's infringement of the '954 Patent is causing irreparable harm for which Signify has no adequate remedy at law unless Defendant is enjoined by this Court. Under 35 U.S.C. § 283, Signify is entitled to a permanent injunction against further infringement of the '954 Patent.

41. On information and belief, Defendant has been aware of and have had notice and actual knowledge of the '954 Patent and its infringement of the '954 Patent at least as early as the service of this Complaint.

### **COUNT THREE**

#### **INFRINGEMENT OF U.S. PATENT NO. 7,014,336**

42. Signify incorporates by reference the allegations in paragraphs 1-41 as if fully set forth herein. On information and belief, Defendant has infringed and is infringing claims of the '336 Patent, including at least claim 132, in violation of 35 U.S.C. § 271(a) by manufacturing, using, offering to sell, selling, and/or importing infringing products.

43. Claim 132 of the '336 Patent recites:

A lighting fixture for generating white-light, comprising:

a plurality of component illumination sources including at least two white LEDs configured to generate electromagnetic radiation of at least two different spectrums; and

a mounting holding said plurality, said mounting designed to allow said spectrums of said plurality to mix and form a resulting spectrum;

wherein the visible portion of said resulting spectrum has intensity greater than background noise at its lowest spectral valley.

44. On information and belief, Defendant has directly infringed and is directly infringing claim 132 of the '336 Patent by making, using, offering to sell, selling, and/or importing at least YLDP05YL Smart LED Bulb (Tunable White) products in this judicial district and elsewhere in the United States.

**Infringing YLDP05YL Smart LED Bulb (Tunable White)**

45. On information and belief, YLDP05YL Smart LED Bulb (Tunable White) products form a lighting fixture for generating white-light.

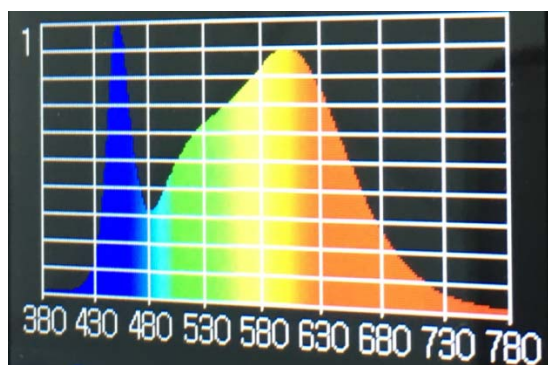


46. On information and belief, YLDP05YL Smart LED Bulb (Tunable White) products include a plurality of component illumination sources including at least two white LEDs configured to generate electromagnetic radiation of at least two different spectrums; for

example, multiple white LEDs are mounted to the circuit board. At least two sets of the white LEDs generate light of at least two different spectrums; for example, a first set of white LEDs (e.g., cool white LEDs C1-C12) generates a spectrum having a color temperature of around 6500K, while a second set of white LEDs generates a spectrum having a color temperature of around 2700K (e.g., warm white LEDs W1-W12).

47. On information and belief, YLDP05YL Smart LED Bulb (Tunable White) products include a mounting holding said plurality, said mounting designed to allow said spectrums of said plurality to mix and form a resulting spectrum; for example, the circuit board to which the LEDs are mounted allows the spectrums of the white LEDs to mix and form a resulting spectrum of white light.

48. On information and belief, the visible portion of said resulting spectrum of YLDP05YL Smart LED Bulb (Tunable White) products has an intensity greater than background noise at its lowest spectral valley; for example, the resulting spectrum is continuous across the visible spectrum of light and has an intensity greater than the background noise at its lowest spectral valley (i.e. at approximately 480 nm), as shown below.



49. On information and belief, Defendant has infringed and is infringing claims of the '336 Patent, including at least claim 181, in violation of 35 U.S.C. § 271(a) by manufacturing, using, offering to sell, selling, and/or importing infringing products.

50. Claim 181 of the '336 Patent recites:

A lighting fixture for generating white light, comprising:

a plurality of component illumination sources including at least one white LED, said plurality including component illumination sources producing electromagnetic radiation of at least two different spectrums; and

a mounting holding said plurality, said mounting designed to allow said spectrums of said plurality to mix and form a resulting spectrum;

wherein each spectral valley wavelength of the resulting spectrum within a photopic response of a human eye is less than a maximum spectral peak wavelength of the resulting spectrum.

51. On information and belief, Defendant has directly infringed and is directly infringing claim 181 of the '336 Patent by making, using, offering to sell, selling, and/or importing at least YLDP06YL Smart LED Bulb (Color) products in this judicial district and elsewhere in the United States.

**Infringing YLDP06YL Smart LED Bulb (Color)**

52. On information and belief, YLDP06YL Smart LED Bulb (Color) products form a lighting fixture for generating white light.

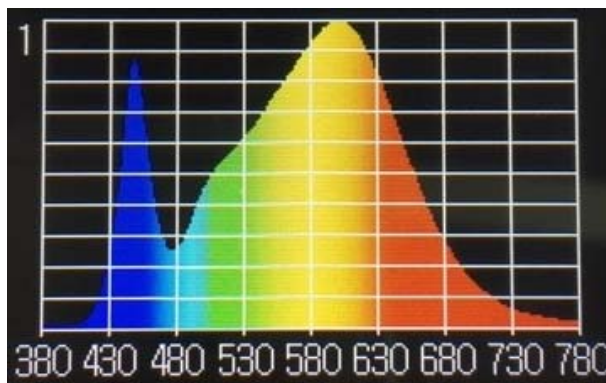


53. On information and belief, YLDP06YL Smart LED Bulb (Color) products include a plurality of component illumination sources including at least one white LED, said plurality including component illumination sources producing electromagnetic radiation of at least two

different spectrums; for example, a plurality of LEDs, including a set of white LEDs (e.g., white LEDs W1-W12) producing one spectrum of light and set of colored LEDs (e.g., red LEDs R1-R3, green LEDs G1-G3, and blue LEDs B1-B3) each color producing a different spectrum of light are included.

54. On information and belief, YLDP06YL Smart LED Bulb (Color) products include a mounting holding said plurality, said mounting designed to allow said spectrums of said plurality to mix and form a resulting spectrum; for example, the circuit board to which the LEDs are mounted allows the spectrums of the LEDs to mix and form a resulting, color or white, spectrum.

55. On information and belief, each spectral valley wavelength of the resulting spectrum within a photopic response of a human eye of the YLDP06YL Smart LED Bulb (Color) products is less than a maximum spectral peak wavelength of the resulting spectrum; for example, the wavelength of the spectral valley (i.e., approximately 470 nm) of the emitted light is lower than the wavelength of the maximum spectral peak (i.e., approximately 600 nm) of the emitted light, as shown below.



56. The full extent of Defendant's infringement is not presently known to Signify. On information and belief, Defendant has made and sold, or will make and sell, products under different names or part numbers that infringe the '336 Patent in a similar manner. Signify makes

this preliminary identification of infringing products and infringed claims in Count Three without the benefit of discovery or claim construction in this action, and expressly reserves the right to augment, supplement, and revise its identifications based on additional information obtained through discovery or otherwise.

57. Signify has suffered and continues to suffer damages as a result of Defendant's infringement of the '336 Patent in an amount to be determined at trial.

58. Defendant's infringement of the '336 Patent is causing irreparable harm for which Signify has no adequate remedy at law unless Defendant is enjoined by this Court. Under 35 U.S.C. § 283, Signify is entitled to a permanent injunction against further infringement of the '336 Patent.

59. On information and belief, Defendant has been aware of and have had notice and actual knowledge of the '336 Patent and its infringement of the '336 Patent at least as early as August 8, 2018, and Defendant's infringement of the '336 Patent has been willful. For example, in July 2014, a representative of Signify met with Mr. Jiang Zhaoning, CEO of Defendant to discuss the patent relevance between Defendants' products and Signify's patents. Also, in September 2015, a representative of Signify had a face-to-face meeting with Mr. Liu Daping, COO of Defendant to discuss the patent relevance between Defendants' products and Signify's patents. Further, on August 8, 2018, Mr. Jiang Zhaoning, CEO of Defendant and Mr. Liu Daping, COO of Defendant, were notified that Defendant's products were infringing the '336 Patent. Defendant's pre-suit knowledge of the '336 Patent and failure to substantively address Signify's numerous notifications of infringement are sufficient to support a plausible inference that Defendant's infringement was willful and egregious, warranting enhancement of damages under 35 U.S.C. § 284, and attorneys' fees and costs incurred under 35 U.S.C. § 285.



**COUNT FOUR**

**INFRINGEMENT OF U.S. PATENT NO. 7,255,457**

60. Signify incorporates by reference the allegations in paragraphs 1-59 as if fully set forth herein.

61. On information and belief, Defendant has infringed and is infringing claims of the '457 Patent, including at least claim 1, in violation of 35 U.S.C. § 271(a) by manufacturing, using, offering to sell, selling, and/or importing infringing products.

62. Claim 1 of the '457 Patent recites:

An apparatus for generating essentially white light, comprising:

at least one first white LED characterized by a first spectrum having a first color temperature, the at least one first white LED including a first phosphor, the at least one first white LED generating at least one first wavelength that is converted by the first phosphor to provide the first spectrum; and

at least one second white LED characterized by a second spectrum having a second color temperature, the at least one second white LED including a second phosphor, the at least one second white LED generating at least one second wavelength that is converted by the second phosphor to provide the second spectrum,

wherein the first color temperature differs from the second color temperature by at least 2200 degrees Kelvin.

63. On information and belief, Defendant has directly infringed and is directly infringing claim 1 of the '457 Patent by making, using, offering to sell, selling, and/or importing at least YLDP05YL Smart LED Bulb (Tunable White) products in this judicial district and elsewhere in the United States.

64. On information and belief, YLDP05YL Smart LED Bulb (Tunable White) products form an apparatus for generating essentially white light.



65. On information and belief, YLDP05YL Smart LED Bulb (Tunable White) products include at least one first white LED characterized by a first spectrum having a first color temperature, the at least one first white LED including a first phosphor, the at least one first white LED generating at least one first wavelength that is converted by the first phosphor to provide the first spectrum; for example, a first set of white LEDs (e.g., warm white LEDs W1-W12) is characterized by a first spectrum having a color temperature of 2700K. Each LED of the first set of white LEDs is a blue LED that emits blue light, which is converted by a phosphor to provide the first spectrum of light perceived as white.

66. On information and belief, YLDP05YL Smart LED Bulb (Tunable White) products include at least one second white LED characterized by a second spectrum having a second color temperature, the at least one second white LED including a second phosphor, the at least one second white LED generating at least one second wavelength that is converted by the second phosphor to provide the second spectrum; for example, a second set of white LEDs (e.g., cool white LEDs C1-C12) is characterized by a second spectrum having a color temperature of

6500K. Each LED of the second set of white LEDs is a blue LED that emits blue light, which is converted by a phosphor to provide the second spectrum of light perceived as white.

67. On information and belief, YLDP05YL Smart LED Bulb (Tunable White) products' first color temperature differs from the second color temperature by at least 2200 degrees Kelvin; for example, the color temperatures of the first set of white LEDs (2700K) and the second set of white LEDs (6500K) are separated by 3800 degrees Kelvin, which is greater than 2200 degrees Kelvin.

68. The full extent of Defendant's infringement is not presently known to Signify. On information and belief, Defendant has made and sold, or will make and sell, products under different names or part numbers that infringe the '457 Patent in a similar manner. Signify makes this preliminary identification of infringing products and infringed claims in Count Four without the benefit of discovery or claim construction in this action, and expressly reserves the right to augment, supplement, and revise its identifications based on additional information obtained through discovery or otherwise.

69. Signify has suffered and continues to suffer damages as a result of Defendant's infringement of the '457 Patent in an amount to be determined at trial.

70. Defendant's infringement of the '457 Patent is causing irreparable harm for which Signify has no adequate remedy at law unless Defendant is enjoined by this Court. Under 35 U.S.C. § 283, Signify is entitled to a permanent injunction against further infringement of the '457 Patent.

71. On information and belief, Defendant has been aware of and have had notice and actual knowledge of the '457 Patent and its infringement of the '457 Patent at least as early as August 8, 2018, and Defendant's infringement of the '457 Patent has been willful. For example,

in July 2014, a representative of Signify met with Mr. Jiang Zhaoning, CEO of Defendant to discuss the patent relevance between Defendants' products and Signify's patents. Also, in September 2015, a representative of Signify had a face-to-face meeting with Mr. Liu Daping, COO of Defendant to discuss the patent relevance between Defendants' products and Signify's patents. Further, on August 8, 2018, Mr. Jiang Zhaoning, CEO of Defendant and Mr. Liu Daping, COO of Defendant, were notified that Defendant's products were infringing the '457 Patent. Defendant's pre-suit knowledge of the '457 Patent and failure to substantively address Signify's numerous notifications of infringement are sufficient to support a plausible inference that Defendant's infringement was willful and egregious, warranting enhancement of damages under 35 U.S.C. § 284, and attorneys' fees and costs incurred under 35 U.S.C. § 285.

#### **COUNT FIVE**

#### **INFRINGEMENT OF U.S. PATENT NO. 9,184,497**

72. Signify incorporates by reference the allegations in paragraphs 1-71 as if fully set forth herein.

73. On information and belief, Defendant has infringed and is infringing claims of the '497 Patent, including at least claim 1, in violation of 35 U.S.C. § 271(a) by manufacturing, using, offering to sell, selling, and/or importing infringing products.

74. Claim 1 of the '497 Patent recites:

A lighting device, comprising:

a light source comprising one or more light-emitting diodes configured for generating light along an optical axis;

a heat sink comprising a metal with an electrical resistivity being less than 0.01  $\Omega\text{m}$ , and configured for removing heat produced by the light source, the heat sink forming at least a portion of an outer enclosure,

a RF communication circuit, and

a first antenna connected to the RF communication circuit for communicating RF control signals and arranged within the outer enclosure, wherein the lighting device comprises one or more metallic components having an extension larger than at least 1/10 of a wavelength of the RF control signals and arranged below a virtual plane drawn orthogonal to the optical axis and going through the first antenna.

75. On information and belief, Defendant has directly infringed and is directly infringing claim 1 of the '497 Patent by making, using, offering to sell, selling, and/or importing at least YLDP05YL Smart LED Bulb (Tunable White) and YLDP06YL Smart LED Bulb (Color) products in this judicial district and elsewhere in the United States.

**Infringing YLDP05YL Smart LED Bulb (Tunable White)**

76. On information and belief, YLDP05YL Smart LED Bulb (Tunable White) products form a lighting device.



77. On information and belief, YLDP05YL Smart LED Bulb (Tunable White) products include a light source comprising one or more light-emitting diodes configured for generating light along an optical axis; for example, multiple light emitting diodes are configured to generate light along an optical axis that extends substantially normal to the surface of the circuit board.

78. On information and belief, YLDP05YL Smart LED Bulb (Tunable White) products include a heat sink comprising a metal with an electrical resistivity being less than  $0.01 \Omega\text{m}$ , and configured for removing heat produced by the light source, the heat sink forming at least a portion of an outer enclosure; for example, a metal heat sink extends along the length of the light bulb, below the circuit board, and has an electrical resistivity less than  $0.01 \Omega\text{m}$ . The heat sink removes heat generated by the LEDs and extends along an outer wall of the light bulb, thus forming part of the outer enclosure.

79. On information and belief, YLDP05YL Smart LED Bulb (Tunable White) products include a RF communication circuit; for example, an RF communication circuit is disposed below the antenna, as shown below.



80. On information and belief, YLDP05YL Smart LED Bulb (Tunable White) products include a first antenna connected to the RF communication circuit for communicating RF control signals and arranged within the outer enclosure, wherein the lighting device comprises one or more metallic components having an extension larger than at least  $\frac{1}{10}$  of a wavelength of the RF control signals and arranged below a virtual plane drawn orthogonal to the optical axis and going through the first antenna; for example, the metal heat sink extends a length larger than  $\frac{1}{10}$  of a wavelength of the RF control signals (i.e., more than approximately 1.25

cm, which is one tenth of the wavelength of a 2.4 GHz WiFi signal). The heat sink is arranged below a plane extending parallel to the circuit board and extending through the first antenna.

**Infringing YLDP06YL Smart LED Bulb (Color)**

81. On information and belief, YLDP06YL Smart LED Bulb (Color) products form a lighting device.



82. On information and belief, YLDP06YL Smart LED Bulb (Color) products include a light source comprising one or more light-emitting diodes configured for generating light along an optical axis; for example, multiple light emitting diodes are configured to generate light along an optical axis that extends substantially normal to the surface of the circuit board.

83. On information and belief, YLDP06YL Smart LED Bulb (Color) products include a heat sink comprising a metal with an electrical resistivity being less than  $0.01 \Omega\text{m}$ , and configured for removing heat produced by the light source, the heat sink forming at least a portion of an outer enclosure; for example, a metal heat sink extends along the length of the light bulb, below the circuit board, and has an electrical resistivity less than  $0.01\Omega\text{m}$ . The heat sink removes heat generated by the LEDs and extends along an outer wall of the light bulb, thus forming part of the outer enclosure.



84. On information and belief, YLDP06YL Smart LED Bulb (Color) products include a RF communication circuit; for example, an RF communication circuit is disposed below the antenna, as shown below.



85. On information and belief, YLDP06YL Smart LED Bulb (Color) products include a first antenna connected to the RF communication circuit for communicating RF control signals and arranged within the outer enclosure, wherein the lighting device comprises one or more metallic components having an extension larger than at least  $\frac{1}{10}$  of a wavelength of the RF control signals and arranged below a virtual plane drawn orthogonal to the optical axis and going through the first antenna; for example, the metal heat sink extends a length larger than  $\frac{1}{10}$  of a wavelength of the RF control signals (i.e., more than approximately 1.25 cm, which is one tenth of the wavelength of a 2.4 GHz WiFi signal). The heat sink is arranged below a plane extending parallel to the circuit board and extending through the first antenna.

86. The full extent of Defendant's infringement is not presently known to Signify. On information and belief, Defendant has made and sold, or will make and sell, products under different names or part numbers that infringe the '497 Patent in a similar manner. Signify makes this preliminary identification of infringing products and infringed claims in Count Five without the benefit of discovery or claim construction in this action, and expressly reserves the right to augment, supplement, and revise its identifications based on additional information obtained through discovery or otherwise.



87. Signify has suffered and continues to suffer damages as a result of Defendant's infringement of the '497 Patent in an amount to be determined at trial.

88. Defendant's infringement of the '497 Patent is causing irreparable harm for which Signify has no adequate remedy at law unless Defendant is enjoined by this Court. Under 35 U.S.C. § 283, Signify is entitled to a permanent injunction against further infringement of the '497 Patent.

89. On information and belief, Defendant has been aware of and have had notice and actual knowledge of the '497 Patent and its infringement of the '497 Patent at least as early as August 8, 2018, and Defendant's infringement of the '497 Patent has been willful. For example, in July 2014, a representative of Signify met with Mr. Jiang Zhaoning, CEO of Defendant to discuss the patent relevance between Defendants' products and Signify's patents. Also, in September 2015, a representative of Signify had a face-to-face meeting with Mr. Liu Daping, COO of Defendant to discuss the patent relevance between Defendants' products and Signify's patents. Further, on August 8, 2018, Mr. Jiang Zhaoning, CEO of Defendant and Mr. Liu Daping, COO of Defendant, were notified that Defendant's products were infringing the '497 Patent. Defendant's pre-suit knowledge of the '497 Patent and failure to substantively address Signify's numerous notifications of infringement are sufficient to support a plausible inference that Defendant's infringement was willful and egregious, warranting enhancement of damages under 35 U.S.C. § 284, and attorneys' fees and costs incurred under 35 U.S.C. § 285.

**PRAYER FOR RELIEF**

WHEREFORE, Signify prays for the following judgments and relief:

- (a) A judgment that Defendant has infringed and is infringing the Patents-in-Suit;
- (b) A permanent injunction against Defendant and its affiliates, subsidiaries, assigns, employees, agents or anyone acting in privity or concert from infringing the Patents-in-Suit, including enjoining the making, offering to sell, selling, using, or importing into the United States products claimed in any of the claims of the Patents-in-Suit; using or performing methods claimed in any of the claims of the Patents-in-Suit; inducing others to use and perform methods that infringe any claim of the Patents-in-Suit; or contributing to others using and performing methods that infringe any claim of the Patents-in-Suit, until the expiration of the Patents-in-Suit;
- (c) An award of damages adequate to compensate Signify for Defendant's patent infringement, including enhanced damages, and an accounting to adequately compensate Signify for the infringement, including, but not limited to, lost profits and/or a reasonable royalty, in accordance with 35 U.S.C. § 284 and applicable law;
- (d) An award of pre-judgment and post-judgment interest at the maximum rate allowed by law;
- (e) An order finding that this is an exceptional case and awarding Signify its costs, expenses, disbursements, and reasonable attorneys' fees related to Defendant's patent infringement under 35 U.S.C. § 285 and all other applicable statutes, rules and common law; and
- (f) Such other further relief, in law or equity, as this Court deems just and proper.

**JURY TRIAL**

In accordance with Rule 38 of the Federal Rules of Civil Procedure, Signify hereby demands a jury trial on all issues triable before a jury.

Dated: October 8, 2019

Respectfully submitted,

BOND, SCHOENECK & KING, PLLC

/s/ Jeremy P. Occek

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